

WHAT IS CLAIMED IS:

1. A substrate for a monochrome liquid crystal display apparatus comprising a substrate, a black matrix formed in a pattern on the substrate, a protection layer formed on the substrate so as to cover the black matrix, and a columnar spacer formed in the area with the black matrix formed of the protection layer, for adjusting the gap between the substrate and the counter substrate, wherein the height from the surface of the substrate to the upper surface of the columnar spacer provided in the pixel part of the substrate is higher than the height from the substrate surface to the upper surface of the columnar spacer provided in the outer peripheral part as the pixel part peripheral area of the substrate by in a range of 0 μm to 0.8 μm .

2. A substrate for a monochrome liquid crystal display apparatus comprising a substrate, a black matrix formed in a pattern on the substrate, a protection layer formed on the substrate so as to cover the black matrix, and a columnar spacer formed in the area with the black matrix formed of the protection layer, for adjusting the gap between the substrate and the counter substrate, wherein the columnar spacer comprises a pixel spacer provided in the pixel part of the substrate, and an outer peripheral spacer provided in the outer peripheral part as the pixel part peripheral area of the substrate such that the height of the pixel spacer is made higher than the height of the outer peripheral spacer.

3. The substrate for a monochrome liquid crystal display apparatus according to claim 1, wherein the columnar spacer comprises a pixel spacer provided in the pixel part of the substrate, and an outer peripheral spacer provided in the outer peripheral part of the substrate such that the height of the pixel spacer is made higher than the height of the outer peripheral spacer.

4. The substrate for a monochrome liquid crystal display apparatus according to claim 1, wherein the substrate for a monochrome liquid crystal display apparatus is used for an IPS type monochrome liquid crystal display apparatus.

5. The substrate for a monochrome liquid crystal display apparatus according to claim 2, wherein the substrate for a monochrome liquid crystal display apparatus is used for an IPS type monochrome liquid crystal display apparatus.

6. The substrate for a monochrome liquid crystal display apparatus according to claim 3, wherein the substrate for a monochrome liquid crystal display apparatus is used for an IPS type monochrome liquid crystal display apparatus.

7. A production method for a substrate for a monochrome liquid crystal display apparatus comprising:

forming a black matrix in a pattern on a substrate,
forming a protection layer on the substrate having the

black matrix formed in the pattern so as to cover the black matrix,
and

forming a columnar spacer for adjusting the gap between the substrate and the counter substrate in the area with the black matrix formed of the protection layer first in the outer peripheral part in the periphery of the pixel part as the display area of the monochrome liquid crystal display apparatus, and then forming the same in the pixel part.

8. The production method for a substrate for a monochrome liquid crystal display apparatus according to claim 7, wherein the substrate for a monochrome liquid crystal display apparatus is used for an IPS type monochrome liquid crystal display apparatus.